

CLAIMS

1. An orthodontic bracket comprising:
a body including a lingual surface for attachment to a tooth and defining an
5 archwire slot; and
a clip movable between an open position permitting access to the archwire
slot and a closed position inhibiting access to the archwire slot, wherein the clip has a
material thickness that is non-uniform.
- 10 2. An orthodontic bracket as claimed in claim 1, wherein the clip includes a
labial portion with free and restrained ends, and wherein the thickness of the clip reduces
from the restrained end to the free end.
- 15 3. An orthodontic bracket as claimed in claim 2, wherein the thickness of the
free end is less than half the thickness of the restrained end.
- 20 4. An orthodontic bracket as claimed in claim 2, wherein the bracket defines
lingual and labial directions, and wherein the restrained end of the clip curves in the
lingual direction and the free end of the clip curves in the labial direction.
5. An orthodontic bracket as claimed in claim 2, wherein the free end
comprises a gingival end.
- 25 6. An orthodontic bracket as claimed in claim 1, wherein the clip comprises a
polymer.

7. An orthodontic bracket comprising:
a body including a lingual surface for attachment to a tooth and defining an archwire slot; and

a clip comprising at least two different materials and being movable
5 between an open position permitting access to the archwire slot and a closed position inhibiting access to the archwire slot.

8. An orthodontic bracket as claimed in claim 7, wherein the two different materials are laminated to each other.

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9. An orthodontic bracket as claimed in claim 7, wherein one material coats the other material.

10. An orthodontic bracket as claimed in claim 7, wherein one material is
15 stiffer than the other material.

11. An orthodontic bracket as claimed in claim 7, wherein one material comprises a polymer material.

20 12. An orthodontic bracket as claimed in claim 7, wherein the clip comprises a lingual portion and a labial portion, and wherein at least one of said two different materials comprises metal positioned in the lingual portion of the clip.

13. An orthodontic bracket as claimed in claim 7, wherein other material
25 comprises polymer material (e.g., polyurethane, fiberglass/resin matrix).

14. An orthodontic bracket as claimed in claim 7, wherein the clip comprises a lingual portion and a labial portion, and wherein the labial portion of the clip is free from metal.

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15. An orthodontic bracket comprising:
a body including a lingual surface for attachment to a tooth and defining a labial-lingual direction; and
an insert coupled to the body and at least partially defining an archwire slot,
5 the insert including a bottom, a first side, and a second side, wherein the first side is longer than the second side in the labial-lingual direction.

16. An orthodontic bracket as claimed in claim 15, further comprising a clip
movable between an open position permitting access to the archwire slot and a closed
10 position inhibiting access to the archwire slot, wherein the insert assists in maintaining the clip in the open position.

17. An orthodontic bracket as claimed in claim 15, wherein the insert defines a
recess in the archwire slot, wherein a portion of the clip is positioned in the recess when
15 the clip is in the closed position.

18. An orthodontic bracket as claimed in claim 15, wherein the first side
comprises a gingival side of the insert.

20 19. An orthodontic bracket as claimed in claim 15, wherein the body comprises
a ceramic material.

20 20. An orthodontic bracket as claimed in claim 15, wherein the insert
comprises a metal material.

21. An orthodontic bracket comprising:
a body including a lingual surface for attachment to a tooth; and
an insert coupled to the body and at least partially defining an archwire slot,
the insert including a bottom and two sides;
5 a recess formed in the archwire slot; and
a clip movable between an open position permitting access to the archwire
slot and a closed position inhibiting access to the archwire slot, wherein a portion of the
clip is positioned in the recess when the clip is in the closed position.

10 22. An orthodontic bracket as claimed in claim 21, wherein the insert includes a
recess portion that defines the recess.

23. An orthodontic bracket as claimed in claim 21, wherein the clip includes a
labial portion having a free end, and wherein the portion of the clip positioned in the recess
15 comprises the free end of the labial portion.

24. An orthodontic bracket as claimed in claim 23, wherein the recess portion
of the insert limits movement of the free end of the labial portion.

20 25. An orthodontic bracket as claimed in claim 21, wherein the recess is formed
in a side of the insert.

26. An orthodontic bracket as claimed in claim 25, wherein the sides include a
gingival side and an occlusal side, and wherein the recess is formed in the gingival side.

25 27. An orthodontic bracket as claimed in claim 21, wherein the archwire slot
includes a bottom and a side, wherein the insert extends from the bottom partially up the
side leaving an uncovered portion of the archwire slot uncovered by the insert, and
wherein the recess is formed in the uncovered portion.

30 28. An orthodontic bracket as claimed in claim 21, wherein the body comprises
a ceramic material.

29. An orthodontic bracket as claimed in claim 21, wherein the insert comprises a metal material.

30. An orthodontic bracket comprising:
a body including a lingual surface for attachment to a tooth and a gingival-occlusal opening having a lingual surface;
an insert coupled to the body and at least partially defining an archwire slot,
5 at least a portion of the insert being spaced from the lingual surface and defining at least part of a labial surface of the opening.
31. An orthodontic bracket as claimed in claim 30, further comprising a clip movable between an open position permitting access to the archwire slot and a closed
10 position inhibiting access to the archwire slot, wherein at least a portion of the clip is positioned in the opening.
32. An orthodontic bracket as claimed in claim 30, wherein the body comprises a ceramic material.
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33. An orthodontic bracket as claimed in claim 30, wherein the insert comprises a metal material.

34. An orthodontic bracket comprising:
a body including a lingual surface for attachment to a tooth;
a gingival-occlusal insert coupled to the body and at least partially defining
a gingival-occlusal opening;
5 a mesio-distal insert coupled to the body and at least partially defining an
archwire slot; and
a clip movable between an open position permitting access to the archwire
slot and a closed position inhibiting access to the archwire slot, wherein at least a portion
of the clip is positioned in the opening.

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35. An orthodontic bracket as claimed in claim 34, wherein the gingival-
occlusal insert contacts the mesio-distal insert.

36. An orthodontic bracket as claimed in claim 34, wherein the body comprises
15 a ceramic material.

37. An orthodontic bracket as claimed in claim 34, wherein the gingival-
occlusal insert comprises a metal material.

20 38. An orthodontic bracket as claimed in claim 34, wherein the mesio-distal
insert comprises a metal material.

39. An orthodontic bracket comprising:
a body including a lingual surface for attachment to a tooth, the body including an archwire slot and at least one tie wing having a labial side, a lingual side, and a gingival/occlusal side; and

5 a clip movable between an open position permitting access to the archwire slot and a closed position inhibiting access to the archwire slot, wherein the clip includes:

a labial portion positioned on the labial side of the tie wing, the labial portion having a mesio-distal first width;

10 a lingual portion positioned on the lingual side of the tie wing, the lingual portion having a mesio-distal second width less than the first width; and

a connecting portion connecting the labial portion to the lingual portion, the connecting portion being position on the gingival-occlusal side of the tie wing when the clip is in the closed position.

15 40. An orthodontic bracket as claimed in claim 39, wherein the clip tapers from the labial portion to the lingual portion.

41. An orthodontic bracket as claimed in claim 39, wherein the first width is substantially constant along the gingival-occlusal length of the labial portion.

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42. An orthodontic bracket as claimed in claim 39, wherein the body includes a gingival-occlusal opening and wherein at least a portion of the lingual portion is position in the opening.

25 43. An orthodontic bracket as claimed in claim 39, wherein the gingival-occlusal side comprises the gingival side of the tie wing.

44. An orthodontic bracket comprising:
a body including a lingual surface for attachment to a tooth, the body including an archwire slot defining a mesio-distal axis;
a clip movable between an open position permitting access to the archwire slot and a closed position inhibiting access to the archwire slot; and
a lateral wing extending from the body in a direction substantially parallel to the mesio-distal axis.
45. An orthodontic bracket as claimed in claim 44, wherein the body includes a tie wing and wherein the lateral wing extends from the tie wing.
46. An orthodontic bracket as claimed in claim 45, wherein the tie wing comprises an occlusal tie wing.
47. An orthodontic bracket as claimed in claim 44, wherein the mesio-distal axis defines a mesial direction and a distal direction, wherein the lateral wing extends in the mesial direction, and wherein the bracket includes another lateral wing extending in the distal direction.

48. An orthodontic bracket as claimed in claim 15, wherein the insert comprises a granite material.

49. An orthodontic bracket as claimed in claim 15, wherein the insert comprises a marble material.

5 50. An orthodontic bracket as claimed in claim 21, wherein the insert comprises a granite material.

51. An orthodontic bracket as claimed in claim 21, wherein the insert comprises a marble material.

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52. An orthodontic bracket as claimed in claim 30, wherein the insert comprises a granite material.

15 53. An orthodontic bracket as claimed in claim 30, wherein the insert comprises a marble material.

54. An orthodontic bracket as claimed in claim 34, wherein the mesio-distal insert comprises a granite material.

20 55. An orthodontic bracket as claimed in claim 34, wherein the mesio-distal insert comprises a marble material.

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